Serial No.: 09/624,785

AMENDMENTS IN THE CLAIMS:

1-4. (Canceled)

5. (Currently Amended) ~~The network receiver of claim 4, wherein~~ A network receiver comprising:

a) an analog to digital converter generating a sequence of sample values comprising a digital carrier signal representing a modulated carrier signal received from a transmitting device;

b) an adaptive equalizer utilizing a set of adaptive filter coefficients to filter the digital carrier signal to generate an equalized digital carrier signal; and

c) a coefficient cache storing a plurality of sets of coefficients, the adaptive equalizer selecting one of the plurality of sets of coefficients to use for filtering,

wherein while a selected one of the plurality of sets of coefficients is utilized to filter the digital carrier signal, the equalizer further includes circuitry for simultaneously calculating a new set of coefficients for use by the equalizer for receipt of subsequent frames,

further including a slicer receiving the equalized digital carrier signal, mapping the digital carrier signal to a plurality of defined constellation points to recover the transmitted data, and providing the equalizer with an error signal representing the distortion between the equalized carrier signal and the defined constellation points and wherein the equalizer utilizes the error signal to select one of the plurality of sets of coefficients providing minimal error,

wherein each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal with particular distortion characteristics,

the selection is performed during a frame training sequence in which the equalizer compares the error signal corresponding to a plurality of sets of coefficients for a training portion of the frame in which a predetermined bit sequence is transmitted, and

the distortion characteristics are a result of network topology and the transmitter's physical location on the network and each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal from a transmitter at a particular physical location.

6. (Original) The network receiver of claim 5, wherein the equalizer includes a multi-tap finite impulse response filter.

7-13. (Canceled)

13. (Currently Amended) ~~The method of claim 12, wherein~~ A method of receiving a data frame transmitted on a network medium, the method comprising:

a) generating a sequence of digital sample values comprising a digital carrier signal representing the transmitted frame;

b) selecting one of a plurality of sets of filter coefficients for use by an adaptive equalizer; and

c) filtering the digital carrier signal utilizing the selected set of filter coefficients to generate an equalized digital carrier signal,

wherein while a selected one of the plurality of sets of coefficients is utilized to filter the digital carrier signal, simultaneously calculating a new set of coefficients for use in equalizing subsequent frames,

further including slicing the equalized digital carrier signal by mapping the digital carrier signal to a plurality of defined constellation points to recover the transmitted data, and providing the equalizer with an error signal representing the distortion between the equalized carrier signal and the defined constellation points, and

utilizing the error signal to select the set of coefficients providing minimal error.

wherein each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal with particular distortion characteristics,

the step of selecting is performed during a frame training sequence in which a predetermined bit sequence is transmitted, and

the distortion characteristics are a result of network topology and the transmitter's physical location on the network and each of the plurality of sets of coefficients is a set of coefficients determined to filter a digital carrier signal from a transmitter at a particular physical location.

14. (Original) The method of claim 13, wherein the step of filtering utilizes a multi-tap finite impulse response filter.

15-19. (Canceled)